

# Perquimans County Agricultural Development Plan

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## Acknowledgements

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This plan was written by W. Stan Dixon and Ed Emory. Dr. Dixon has an Ed.D. from N.C. State University and served with N.C. Cooperative Extension in Martin, Wake and Greene counties. He retired in 2009 from N.C. Cooperative Extension as County Extension Director. Mr. Emory holds a B.S. and M.Ed. from N.C. State University and served with the N.C. Cooperative Extension Service in Pamlico and Duplin Counties for more than 28 years. He retired in 2009 after serving 19 years as County Extension Director in Duplin County.

The following agencies and individuals assisted with the development of this plan:

- North Carolina Cooperative Extension, Perquimans County Center
- Perquimans County Board of Commissioners
- Perquimans County Manager
- North Carolina Forest Service
- Lois G. Britt Agribusiness Center, University of Mount Olive
- The citizens, farmers and agribusinesses of Perquimans County





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## Executive Summary

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Perquimans County has a viable agricultural sector that is an important part of the total county fabric of life. The goal of this Agricultural Development Plan is to reflect the importance of agriculture and assess the opportunities, challenges and issues that are currently facing the industry. This plan provides recommendations, based on citizen input on ways to enhance agriculture, forestry, agribusiness and agritourism.

Farmland is an irreplaceable natural resource, and the farmers who are stewards of the resource impact the economy and quality of life for all county residents. The economic impact of the agriculture sector in 2012 was 37.8 percent of the county's value added total income. The agriculture sector also accounts for 12.9 percent of Perquimans County's total employment<sup>1</sup>. Perquimans County has the resources, natural and human, to ensure that agriculture can prosper in the future. The impact of agriculture in Perquimans County in 2012<sup>2</sup>:

\*Agriculture and agribusiness contributed \$87,810,647 in total income

\*Perquimans ranked 9<sup>th</sup> in the soybean production

\*Perquimans ranked 3<sup>rd</sup> in wheat production

\*Perquimans ranked 17<sup>th</sup> in corn production

\*Perquimans ranked 11<sup>th</sup> in cotton production

\*Perquimans ranked 22<sup>nd</sup> in broiler production

\*Perquimans ranked 85<sup>th</sup> in beef cattle production

\*In total cash receipts from agriculture, Perquimans County ranked 39<sup>th</sup> in the state<sup>3</sup>

County farmers surveyed, 63 percent, lacked sufficient land to expand or diversify their operations. Perquimans County farmers reported facing other critical issues, low commodity prices, export demand for products, land rental

rates, competition for land, available labor, and rising production input costs. The farmers are confronted by other challenges to their operations, such as aging farmer population, with the average age of farmers being 54.1 years old, and 88 percent not having farm transition plans. These issues present opportunities to enhance agriculture through education and support of citizens and local government.

Of the non-farm citizens surveyed, 100 percent believe that local government should take action to preserve farmland as a valuable resource. One hundred percent of non-farm citizens believe that farming enhances the scenic beauty and open spaces of the county while providing a positive impact on the environment. All of non-farm respondents support farm and forest preservation efforts in the county.

At the center of the Perquimans County Farm Preservation Plan based on information provided by farmers, agribusiness leaders and non-farm residents through personal interviews and surveys are proposed recommendations. The recommendations and action steps were developed to provide a guide for protecting and enhancing agriculture in Perquimans County. The success of this plan depends on the collaboration between local government, agricultural organizations, farmers, agribusiness and citizens of Perquimans County. The plan needs to be evaluated annually to celebrate accomplishments and add new recommendations as needed. The recommendations are:

- 1. Support measures to protect and promote forest and farmland in Perquimans County.**
- 2. Increase Enrollment in Voluntary Agricultural District (VAD) and adopt and implement Enhanced Voluntary Agricultural District (EVAD) Programs**
- 3. Develop and conduct programs to assist Perquimans County farm and forest landowners with farm transition planning.**
- 4. Promote appreciation and awareness of the benefits of agriculture to Perquimans elected officials and citizens.**
- 5. Expand and support youth agricultural educational programs.**

**6. Develop technical, business and marketing training for the maintenance and expansion of agriculture in Perquimans County.**

The intent of this plan is neither to limit nor restrict landowners' rights and uses. The plan is intended to serve as a guide for actions to provide farmers, landowners and citizens an increased awareness of farmland preservation opportunities. Agriculture is important to Perquimans County and its economy and to the well-being of family farms. However, the final decision on farmland preservation rests in the hands of the owners of farm and forests.



## A Need for Action

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Agriculture, consisting of food, fiber and forestry, is North Carolina's leading industry. In a 2015 report by Mike Walden, professor and extension economist at North Carolina State University, more than 16% of the state's workforce was directly involved with agriculture, an industry that contributes \$83.7 billion, or 17%, to the gross state product in North Carolina<sup>4</sup>. In Perquimans County, agriculture accounted for 12.9% of the county's employment in 2012. According to Mike Walden, in 2012 agriculture and agribusiness added \$87,810,647 or 37.8% of the county's value added total income<sup>5</sup>.

Perquimans County's leadership is cognizant of the importance of agriculture to the local economy and is supportive of an Agriculture Development Plan that addresses issues related to farm and agribusiness viability for the future. The goal of the Perquimans County Agricultural Development Plan is to provide strategic actions that will guide local leaders in their efforts to preserve farms and forests, as well as market the many benefits of the agricultural industry.

## Overview of Perquimans County

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Established in 1668, Perquimans County was part of the early settled Albemarle area of North Carolina. Located in the northeastern part of North Carolina, Perquimans County occupies land bordered by the Great Dismal Swamp to the north and the Albemarle Sound to the south.

Named for a Yeopim Indian term meaning 'Land of Beautiful Women,' Perquimans County abounds with natural resources. Yeopim is a derivative of the Algonquians and the Tuscarora<sup>6</sup>.

The first church was organized in Perquimans County in 1672 in the town of Hereford.

Hereford, the county seat, was incorporated in 1758, sits on the banks of the Perquimans River. Early settlers were hunters and trappers, looking for a trading outpost when they established Hereford as a town. In the early 1900's Hereford was a busy lumber town because of its water and rail transportation. Agriculture has always been a leading industry in Perquimans County<sup>7</sup>.

The county is known for its nearly 100 miles of shoreline which attracts hunters, fishermen and boaters. The shoreline is also attractive to residents who wish to live on the water.

### *Perquimans County Demographics*

According to the US Census 2016 estimates, Perquimans County has a population of 13,335. This figure represents a very slight decrease from the 2010 census. The county is 74 percent white, 23 percent African American, and 2.7 percent Hispanic<sup>8</sup>.

Perquimans has two incorporated areas of Hereford and Winfall. Other communities include Chapanoke, Belvidere, Durants Neck, and Snug Harbor.

Perquimans County is divided into five townships Belvidere, Hereford, Parkville, New Hope, and Bethel.



Map 1. Perquimans Township Map. Source: Perquimans County GIS

### *Economy*

The North Carolina Department of Commerce ranks each of the state's 100 counties into three tiers based on the economic well-being of each county. Tier 1 is most distressed, and Tier 3 is least distressed. Perquimans County is designated as a Tier 2 county and remained in Tier 2 since 2007. North Carolina uses these designations to encourage economic growth through incentives in distressed counties. Perquimans' Tier status provides opportunities for certain grants and other incentives aimed at stimulating the county's economy<sup>9</sup>.

In 2015, the median household income in Perquimans County was \$45,208.00 compared to the state figure of \$46,868.00. Seventeen percent of Perquimans' population is below the poverty level, which is slightly higher than the state's at 16 percent<sup>10</sup>.

Thirteen percent or 641 working Perquimans County residents work outside North Carolina. Fifty percent or 2,404 residents work within North Carolina but outside Perquimans County. Thirty-seven percent or 1,792 residents work within the county. The unemployment rate is 6.4 percent, which is higher than the North Carolina rate of 4.2 percent<sup>11</sup>.

Agriculture and agribusiness provided jobs for 12.9 percent of Perquimans County's working residents according to a study completed by Dr. Mike Walden in 2012<sup>12</sup>.

### ***Cost of Services***

American Farmland Trust conducted 151 cost-of-community-services studies, including six in North Carolina, to determine the contributions made to the economy by land uses. The studies focus on three main land uses: commercial and industrial, working and open land, and residential. Agricultural and commercial land uses require few public services than residential land uses, saving money for the county. For each \$1 of revenue received from each land use, the cost of community services study concluded that:

- Residential land cost \$1.16 in public services.
- Working and open lands (including agriculture and forestry) require \$0.35 for public services.
- Commercial and industrial land cost \$0.29 for public services.

While similar impacts would be expected in Perquimans County, a study of this nature can help local leaders and developers understand the impact and importance of planned land-use development on the county's economy<sup>13</sup>.

### ***Infrastructure and Transportation***

Perquimans County is connected to the Northeast Region by US Highway 17 and NC 37. These highways provide access to Interstate 70, Outer Banks, Albemarle Sound and Norfolk, Virginia.

The county is served by the Chesapeake and Albemarle Railroad that runs to the Port of Virginia. These 68 miles of track connect Hertford with the Chesapeake area of Virginia.

Perquimans County is located within 25 miles of two regional airports located in Edenton and Elizabeth City. The county is also within 90 minutes of the Norfolk International Airport which provides domestic and international passenger service.

Perquimans County has three water facilities located in Bethel, Winfall and Hertford. The county operates the Bethel and Winfall plants, and the town of Hertford operates the Hertford facility. Together the plants treat 2.66 million gallons of water per day. Municipal waste water is treated at all three facilities<sup>14</sup>.

### ***Education***

A majority (84.9%) of the population of Perquimans over 25 years of age have completed high school, compared to 85.8 percent of all North Carolina citizens over the age of 25. Similarly, 17.4 percent of Perquimans county residents have a Bachelor's degree or higher, compared to 28.4 percent in North Carolina<sup>15</sup>.

The Perquimans County School System enrolls 1,800 students in one primary school, one grammar school, one middle school and one high school. These schools are served by 150 licensed personnels<sup>16</sup>. The county has no post-secondary educational institutions. The nearest colleges and universities are located in Elizabeth City, which are Elizabeth City State University, College of the Albemarle Community College and Mid-Atlantic Christian University. East Carolina University is within 90 minutes of Hertford, North Carolina.

### ***Natural Attributes***

In Perquimans County, as with all areas, natural resources are paramount in agricultural production. Perquimans County consists of 247 square miles of land and 82 square miles of water.

The Perquimans River flows north to south in the center of Perquimans County. The Little River flows north to south and is the east border of the county. The Yeopin River also flows north to south and forms the western border of the county. The county is also home to five major waterways which are Bethel Creek, Mill Creek, Godwin Creek, Yeopin Creek and Sutton Creek. The Albemarle Sound is the southern border of Perquimans County. This major body is approximately 50 miles long and varies in width from 5 to 14 miles. While mostly shallow, the deepest points in the Albemarle Sound are 25 feet. It is also part of the Intra-Coastal waterway<sup>17</sup>.

Both land and water are irreplaceable resources. A combination of best management practices and wise conservation must be employed to keep the resources in good condition.

### *Soils*

Soils are classified into different associations which help determine a soil's suitability for different uses. Soil uses include growing crops and trees, and resident and commercial construction. The Soils Survey completed by USDA Soil Conservation Service for Perquimans and Chowan Counties have eight major soil associations which are:

1. Roanoke-Tomotley-Perquimans soils are nearly level, poorly drained soils that have a loamy surface layer with loamy or clayey subsoil. Most suited for crop land, this association is poorly suited for urban and recreational uses. Found in broad flats and in depressions, this association accounts for 37 percent of the soils in Perquimans and Chowan Counties.
2. Conetoe-Wando-Seabrook soils are nearly level, gently sloping; well-drained that has a sandy surface layer and a loam or sandy subsoil. Found on ridges and flats among small streams that flow into the Albemarle Sound and Chowan River. This association makes up 7 percent of the survey area. These soils are best suited for woodland and cropland.
3. Tomahawk-Echaw-Valhalla are nearly level and gently sloping, moderately well-drained, somewhat poorly drained and well-drained soils that have sandy surface layer and a loamy or sandy subsoil. Making up 6 percent of the survey area, these soils are best suited for cropland and woodland, with the Valhalla soils suited for most urban uses. This association is found on smooth and slightly rounded ridges along the Suffolk Scarp.
4. Dogue-Augusta-State soils are nearly level and gently sloping, moderately well-drained, somewhat poorly drained, and well-drained soils that have a sandy or loamy surface layer and a loamy or clayey subsoil. Making up 11 percent of the survey area, these soils are best suited for crops and woodlands. This association is found on smooth

ridges along small streams that flow into the Albemarle Sound, the Chowan River and the Perquimans River.

5. Portsmouth-Arapahoe-Cape Fear soils are nearly level, very poorly drained soils that have a loamy surface layer and loamy or clayey subsoil. Making up 23 percent of the survey area, this association is used mainly for cropland and woodland. This association is found on broad flats and in depressions.
6. Chapanoke-Yeopin soils are nearly level and gently sloping, somewhat poorly drained and moderately well-drained soils that have a loamy surface layer and loamy subsoil. Making up 4 percent of the survey area, these soils are well suited for croplands and woodlands. This association is found on smooth ridges and flats along small streams that flow into the Albemarle Sound and Perquimans River.
7. Chowan-Dorovan soils are nearly level, very poorly drained soils that are loamy and underlying by muck and soils that are muck throughout. Making up 9 percent of the survey area, these soils are found on the flood plains of the Chowan River, Perquimans River and the Albemarle River. The soils are poorly suited for crops, woodland and most urban uses.
8. Scuppernong soils are nearly level, very poorly drained and they have a surface layer of muck and mucky and loamy underlying material. This association makes up 3 percent of the county and is found in oval-shaped depressions and in the northern part of Perquimans County in the Dismal Swamp. If drained, the soils are suited to use for crops and woodland<sup>18</sup>.

### ***Water and Drainage Issues***

Hurricane Matthew and other severe storms have created drainage issues in the rivers and streams of Perquimans County. Downed trees and brush have clogged these waterways. Efforts are underway to clear the debris and open up the rivers and streams to allow natural drainage of all Perquimans' land<sup>19</sup>.

### ***Forestry***

Perquimans County forestland totals 71,631 acres, with 92 percent owned by private landowners. According to North Carolina Cooperative Extension, the

value of harvested timber in 2012 was \$6,800,000 in Perquimans County. The total forest industry economic impact to Perquimans County was \$4.8 million. Forty-two people are employed in the Perquimans County forest industry<sup>20</sup>.

### ***Boating***

Recreational boating is one of the largest tourism activities in Perquimans County. Boaters are drawn to the rivers and the Albemarle Sound. The county and the town of Hertford are destinations for recreational boaters and have service and docking facilities available<sup>21</sup>.



## Perquimans County: the State of Agriculture

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Agriculture accounted for 12.9 percent of Perquimans County's employment in 2012. According to Dr. Mike Walden in 2012, agriculture and agribusiness added \$87,810,647 or 37.8 percent of the county's value added total income<sup>22</sup>.

The number of farms in Perquimans County decreased from 2002 to 2012, according to the US Census of Agriculture from 193 in 2002 to 185 in 2012. The amount in total farmland in Perquimans County decreased from 94,458 acres in 2002 to 80,116 acres in 2012. The average farm size decreased from 489 acres in 2002 to 433 acres in 2012. Of the farmland in Perquimans County, crop land accounted for 72,423 acres in 2012<sup>23</sup>.

Agriculture is an important element of Perquimans County's economy and also impacts the state's economy and agricultural production. In 2015, Perquimans was ranked in North Carolina as follows:

- 22<sup>nd</sup> in broiler production
- 11<sup>th</sup> in cotton production
- 9<sup>th</sup> in soybeans
- 3<sup>rd</sup> in wheat
- 17<sup>th</sup> in corn production
- 85<sup>th</sup> in beef cattle

Perquimans County ranked 39<sup>th</sup> in the state of North Carolina total cash receipts from farm products produced and sold in 2015<sup>24</sup>.

In a recent strategic planning process, the Perquimans County Economic Development identified the following priorities that may impact agriculture:

- Alternative energy
- Tourism
- Agriculture biotechnology<sup>25</sup>

## *Crops*

Perquimans County, in 2012, 185 farms harvested crops from 71,724 acres. Receipts from crop sales totaled \$59,200,000 in 2015. Production of major crops in Perquimans County in 2015 includes:

- Soybeans, 45,500 acres
- Wheat, 20,000 acres
- Corn, 11,700 acres
- Cotton, 9,800 acres<sup>26</sup>

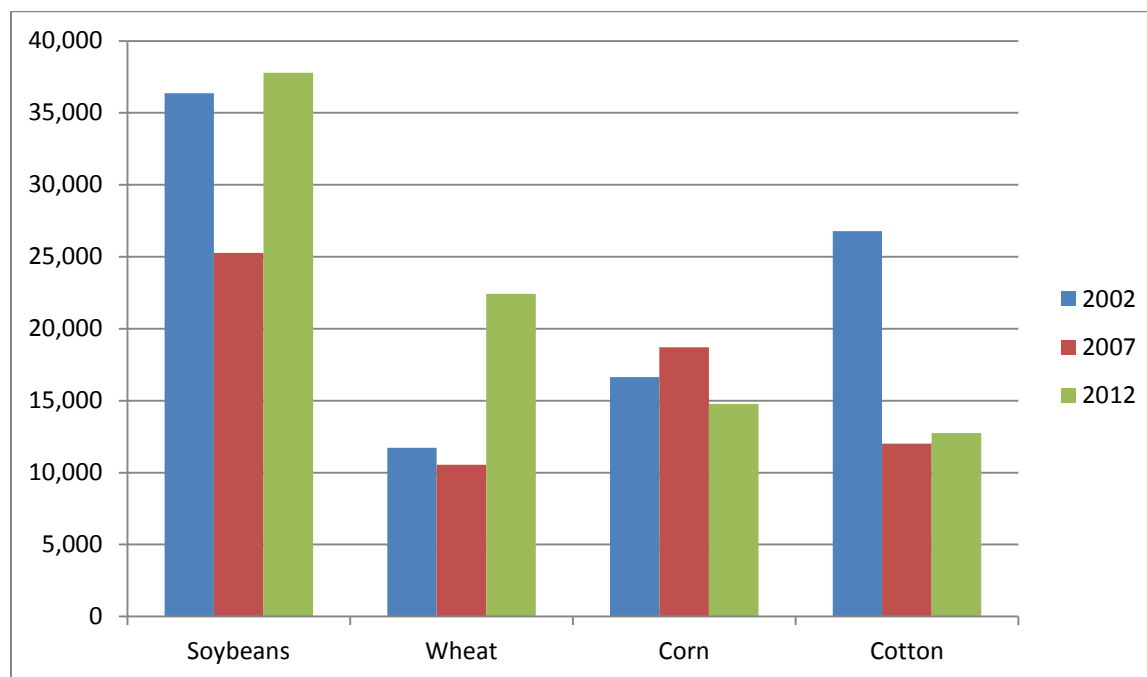


Figure 1 Major Crops by acres in Perquimans County, Source: 2016 NCDA Ag Statistics<sup>27</sup>.

## *Livestock and Poultry*

In 2015, Perquimans County farmers realized cash receipts from livestock and poultry of \$48,980,801<sup>28</sup>.

Number of cattle in 2015 was 700 in Perquimans County<sup>29</sup>.

According to the 2012 US Census of Agriculture, Perquimans County had sixteen broiler farms with 10,900,000 chickens<sup>30</sup>. The county ranks 22<sup>nd</sup> in broiler production in the state<sup>31</sup>.

### ***Aquaculture***

Perquimans County is home to two aquaculture enterprises. One of these farms grows crawfish and the other produces hybrid striped bass. According to Steve Gabel, Area Specialized Agent, Agriculture-Aquaculture, with North Carolina Cooperative Extension, estimates the combined annual income of these operations \$25,000.00

### ***Forestry***

Perquimans County forestland totals 71,631 acres, with 92 percent owned by private landowners. According to North Carolina Cooperative Extension, the value of harvested timber in 2012 was \$6,800,000 in Perquimans County. The total forest industry economic impact to Perquimans County was \$4.8 million. Forty-two people are employed in the Perquimans County forest industry<sup>32</sup>.

### ***Farmer Demographics***

The number of full-time farmers from 2002 to 2012 showed a decrease of 16.4 percent. The number of part-time farmers shows an increase of 26 percent during the same time period. The average age of farmers in Perquimans County was 54.1 years of age in 2012. Principal operators by gender were 179 male and 6 female in 2012. The majority of farm owners are white (217), while 22 were African American<sup>33</sup>.

The following chart represents principal farm operators' primary occupation—full-time or part-time. Data is shown for 2002, 2007 and 2012.

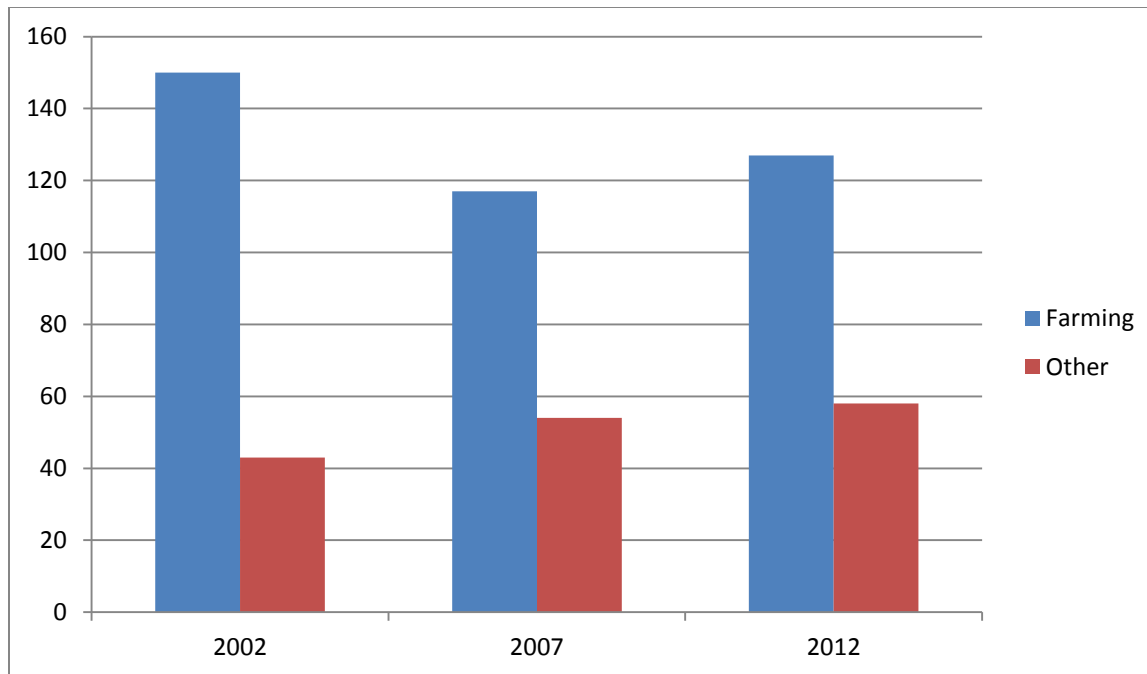


Figure 2: Primary Occupation of Perquimans County Farmers

Source: US Census of Agriculture, 2012<sup>34</sup>

# Farm and Forest Protection Programs

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(Compiled by John Bonham, 2009)

## *Present-Use Value Tax Program*

Present-Use Value, or PUV, is a program established by N.C.G.S. §§ 105-277.2 to .7 and administered by the county assessor through which qualifying property can be assessed, for property tax purposes, based on its use as agricultural, horticultural or forest land. The present use value is the value of the land based solely on its ability to produce income. Qualifying property is assessed at its present-use value rather than its market value. The tax office also maintains a market value for the land, and the difference between the market value and the present-use value is maintained in the tax records as deferred taxes. When land becomes disqualified from the program, the deferred taxes for the current and three previous years, with interest, will usually become payable and due.

## *Basic Requirements*

Minimum acreage of production land:

- 10 acres for agricultural use
- Five acres for horticulture use
- 20 acres for forest use

Production must follow a sound management plan.

Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least \$1,000 for the three years preceding the application year.

Forest land must be following a forest management plan.

## *Benefits*

Protection from increasing land values that are based on development potential and the potential increase in property taxes

More information can be found at  
<http://www.dor.state.nc.us/publications/property.html>.

### ***Voluntary Agricultural Districts (VAD)***

Established by N.C.G.S. §§ 106-737 to 743 and administered at the county level, Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purposes of the districts are to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms.

### ***Requirements***

Land must be enrolled in the Present-Use Value program or otherwise be determined to meet the qualifications of the program.

The landowner must enter into a revocable agreement to limit development for a 10-year period.

### ***Benefits***

- Notification to buyers of nearby property that they're moving into an agricultural area
- Abeyance of water and sewer assessments
- Public hearings on the condemnation of farmland
- Stronger protection from nuisance suits
- Representation by an appointed board regarding concerns on threats to the agricultural sector

### ***Enhanced Voluntary Agricultural Districts (EVAD)***

Established by N.C.G.S §§ 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a VAD formed of one or more farms that are subject to an IRREVOCABLE 10-year agreement to limit development. In return for the condition of irrevocability, the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of non-farm

products and still qualify as a bona fide farm, and being eligible to receive up to 90 percent cost-share assistance from the Agricultural Cost-Share Program.

### ***Conservation Easements***

A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture.

### ***Basic Requirements***

Permanently foregoing the right to subdivide or develop the land being conserved. There will be other limitations on activities to preserve the land's productivity, environmental values and rural character. Cash payments in the range of \$20,000 to \$40,000 are needed to cover the costs of the transaction. These costs are for legal services, a survey, an appraisal, long-term stewardship services provided by the conservation partner and other miscellaneous activities. In some cases, grant funds will cover these costs.

### ***Other Information***

A portion of the property can be left out of the easement, thereby providing an area for future homes and other non-farm activities.

Agricultural activities, including forestry, are allowed under the agreement.

Despite the term "easement," access to the public is not provided by the agreement.

The value of a conservation easement is determined by a licensed land appraiser and is typically between 25 percent and 75 percent of the land's market value.

A periodic inspection of the property is required to ensure that development does not occur. This provision will be included in the agreement.

The agreement is recorded on the county's land records and runs with the title. All future landowners must comply with the terms and conditions of the agreement.

### ***Financial Benefits***

If the conservation easement is donated, then the landowner will likely qualify for a federal income tax deduction and a state income tax credit. The value of these benefits depends on the appraised value of the easement and the income tax situation of the landowner.

A conservation easement also can be sold by the landowner through a transaction commonly referred to as a Purchase of Development Rights (PDR) or Purchase of Agricultural Conservation Easement (PACE). Funds to purchase a conservation easement can be raised from private and government sources. North Carolina and the federal government have programs to purchase agricultural conservation easements. Funding through these programs is very competitive and will generally amount to a percentage of the easement's value. The tax benefits described above can be claimed for any of the easement's value above the purchase price.

### ***Term Conservation Easements***

Also called Agricultural Agreements, these agreements are similar to conservation easements but apply for a finite period of time agreed to by the landowner and conservation partner.

### ***Transfer of Development Rights***

A program set up by local units of government that utilizes conservation easements to preserve farmland by providing incentives to increase development density in a designated area. The program identifies the "sending area" where conservation is being encouraged and the "receiving area" where development is preferred. A landowner in the receiving area can purchase a conservation easement on a property in the sending area and receive additional density allowances. In North Carolina, counties must receive authorization from the General Assembly to develop and implement a TDR program.



### ***Farm Transition Planning***

Making careful plans for the transfer of ownership of farm property and assets from the current owner to the next can be enough to preserve a farm for decades. Many options are available when planning an estate or land transfer. Farm owners can increase the likelihood of a successful transition that maintains the viability of the farm by obtaining professional assistance early in the process.

### ***Right-to-Farm Law***

North Carolina has a state right-to-farm law (N.C.G.S. §§ 106-700 to 701(2006)) that protects farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year and are operated properly and without negligence.

### ***N.C. Agricultural Development and Farmland Preservation Trust Fund***

N.C.G.S. § 106-744(c) established a trust fund to be administered by the Commissioner of Agriculture. The purpose of the trust fund is to provide monies to purchase agricultural conservation easements and to fund programs that promote the development and sustainability of farming, and the transition of existing farms to new farm families. Counties and nonprofit conservation organizations can apply for grants for these purposes.

## Challenges, Opportunities and Trends: Survey and Interview Results

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The methodology employed to access information, perceptions and attitudes related to agriculture and agribusiness in Perquimans County consisted of written surveys and interviews with three target audiences—agriculture producers, agribusiness owners and non-farm residents of Perquimans County. Surveys were distributed by the Perquimans County Center of the North Carolina Cooperative Extension Service.

In addition, key leaders in Perquimans County from all three targeted groups were interviewed to better identify challenges and opportunities that exist in the county's agricultural segment. All descriptive statistics presented in this document were calculated using data obtained from these processes. Survey and interview information revealed pertinent information on the state of agriculture in Perquimans County from the perspectives of farmers, agribusinesses, and non-farm residents as well as from data sources such as USDA and NCDA.

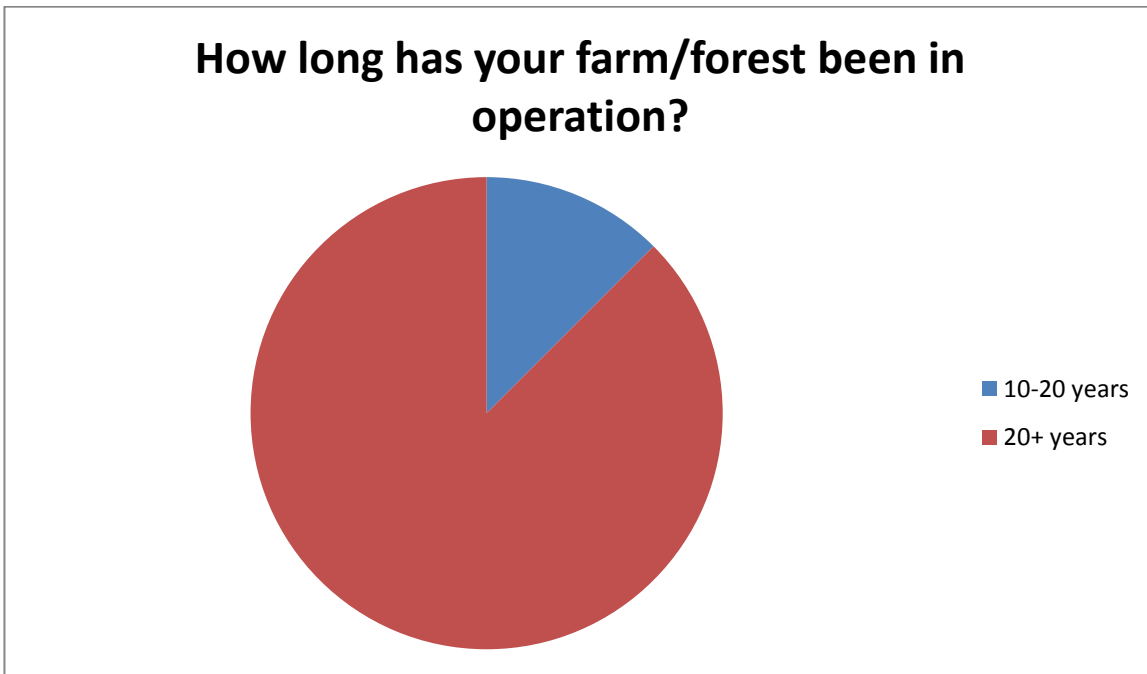
The results identify specific challenges and opportunities affecting the future of agriculture in the county.

### *Agriculture Producer Analysis*

A review of the 2012 Census of Agriculture revealed that there were 185 farms in the county being cultivated by 179 male and 6 female operators. Perquimans County farmers are predominately white with 217 white and 22 African American operators. The average age of Perquimans farmers was reported as 54.1 years of age in 2012<sup>35</sup>. Farmers providing information for the Perquimans County Agricultural Development Plan represented operations from across the county. The average age of survey respondents was 60.25 years old.

According to the survey, the majority of the operations (75 percent) were defined as farm production only, and 25 percent as primarily farm production with some timber production.

Eighty-seven percent of Perquimans County farmers surveyed indicated that they had been in operation more than 20 years. Only 13 percent of respondents had been in operation 10 to 20 years.



**Figure 3.** Source: Perquimans Producer Survey 2017

Almost 63 percent of the responding farmers indicated that their operations provided the majority of their household income. Of the farmers responding, less than 33 percent have expanded their operations during the last five years. Of those who wanted to expand but did not, listed the following reasons:

- Lack of available land to rent
- Low profit margin
- Age of owner/ operator
- High cost of equipment

Fifty percent of Perquimans' respondents indicated that they were satisfied with the current size of their operations.

Notably, 63 percent of farmers surveyed stated that they did not own sufficient property to expand or diversify their operation. This indicates the

importance of and need for leasable land for operational expansion in Perquimans County.

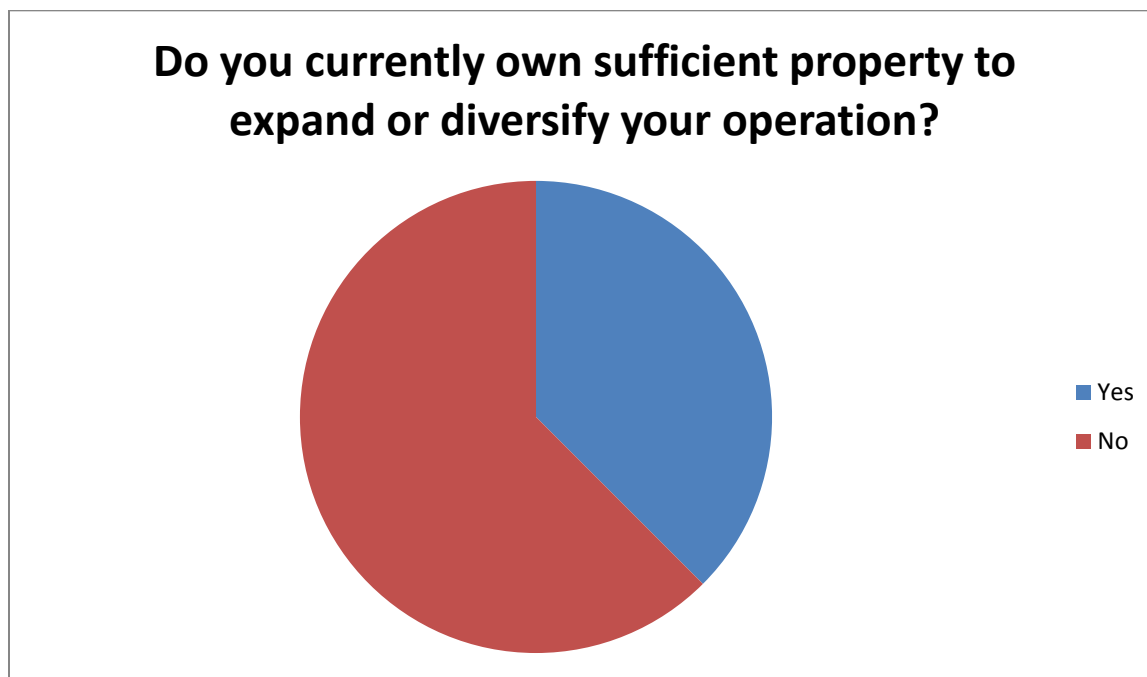


Figure 4. Source: Perquimans Producer Survey 2017

Farmers who participated in the surveys identified the most critical issues expected to influence future farming operations as commodity prices, competition for available land, and production input costs.

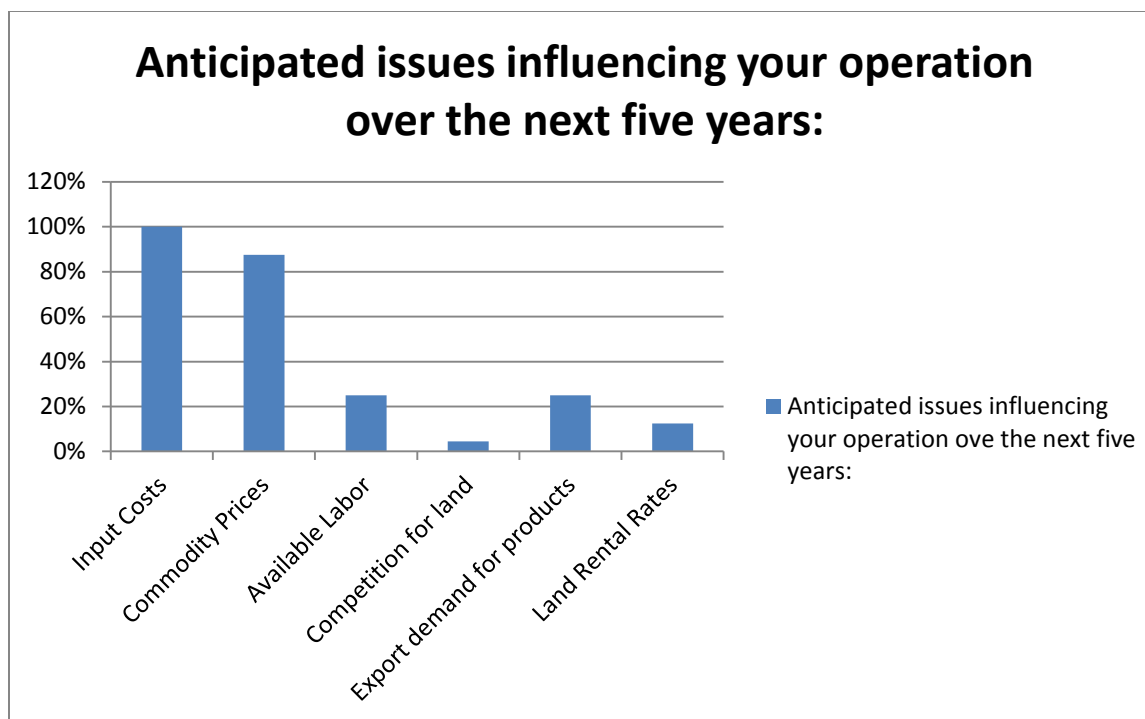


Figure 5. Source: Perquimans Producer Survey 2017

Additional information from the farming community indicated that upon retirement, nearly 75 percent of farmers expected to transfer the farm to family members for continued operation as a family farm (Figure 6). However, 88 percent do not have a farm transition plan. This indicates a need to have training for some farm owners on developing effective farm transition plans. Family farms are the backbone of agriculture in North Carolina, educating farmers on how to pass their farms on to heirs or another generation of farmers is essential to the future of agriculture.

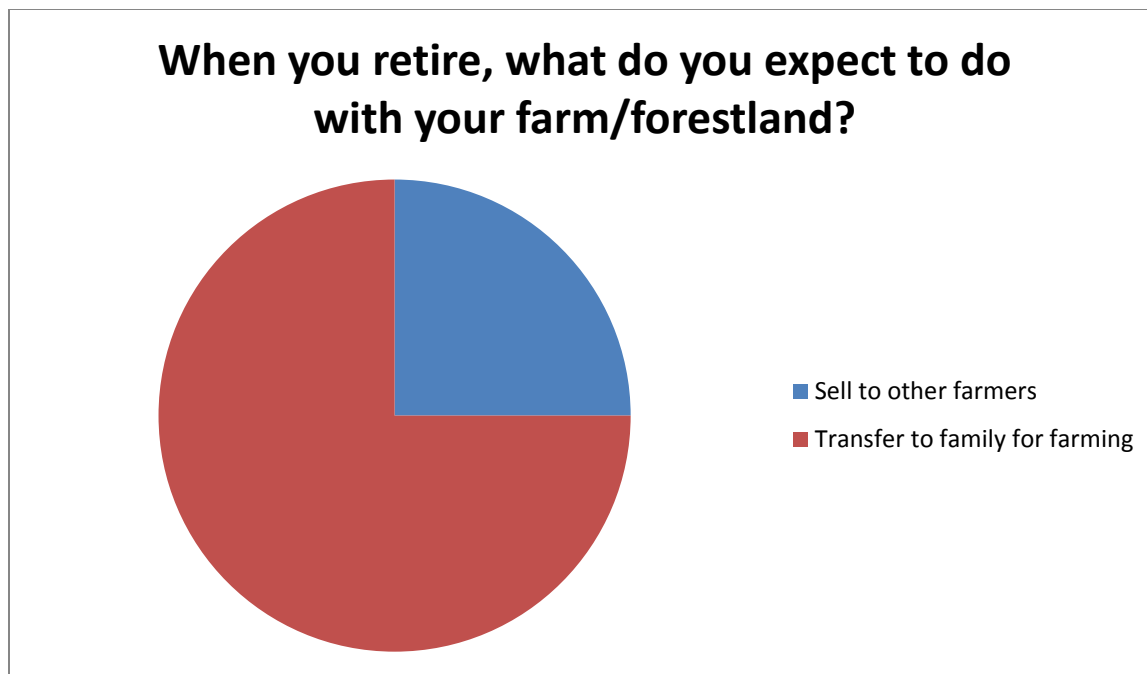


Figure 6. Source: Perquimans Producer Survey 2017

Perquimans County offers a deferred tax program beneficial to farmers and landowners designated as the Present-Use Value Taxation program (PUV). This program offers owners of forest land and those operating legitimate farms a deferred tax program based upon their present use in agriculture, horticulture, or forest land. Eighty-six percent of survey respondents answered that they were enrolled in the PUV program. Almost 14 percent answered that they did not know whether or not their farmland was enrolled. These results indicate a definite need to educate all landowners on the benefits of the PUV program. While an increased knowledge of this program could result in additional land enrolled in the program and, in turn, reduce tax revenues, the cost of community services for agricultural land versus residential land shows that the revenue outcome still provides a net gain to the county coffers.

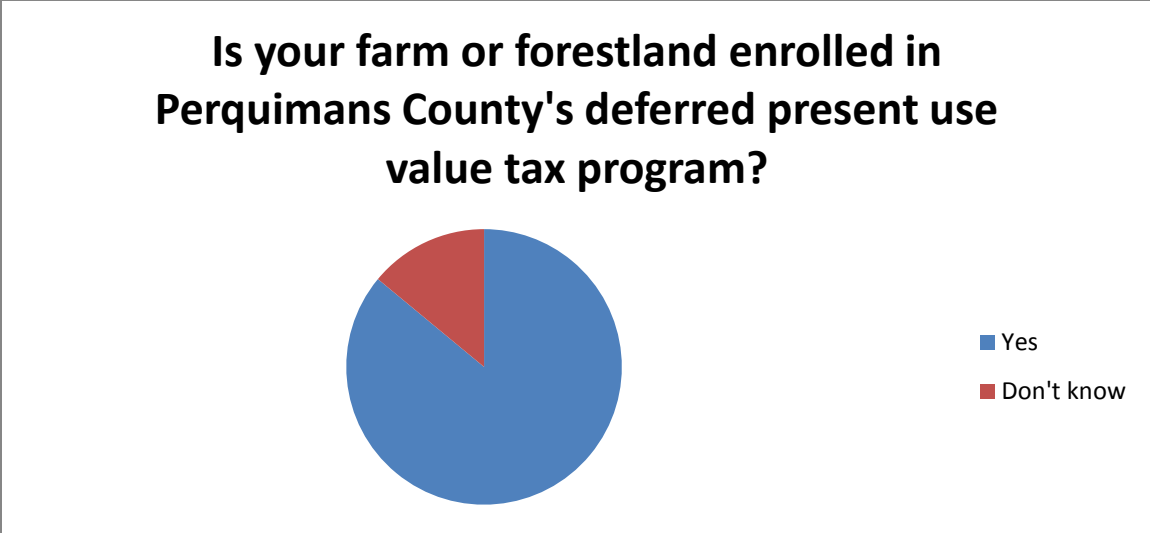


Figure 7. Source: Perquimans Producer Survey 2017

When Perquimans County farmers were asked to identify taxes that were impediments to their profitability, 87.5 percent listed federal self-employment taxes, 75 percent listed Federal Income Tax and 62.5 percent cited estate tax. (Figure 8)

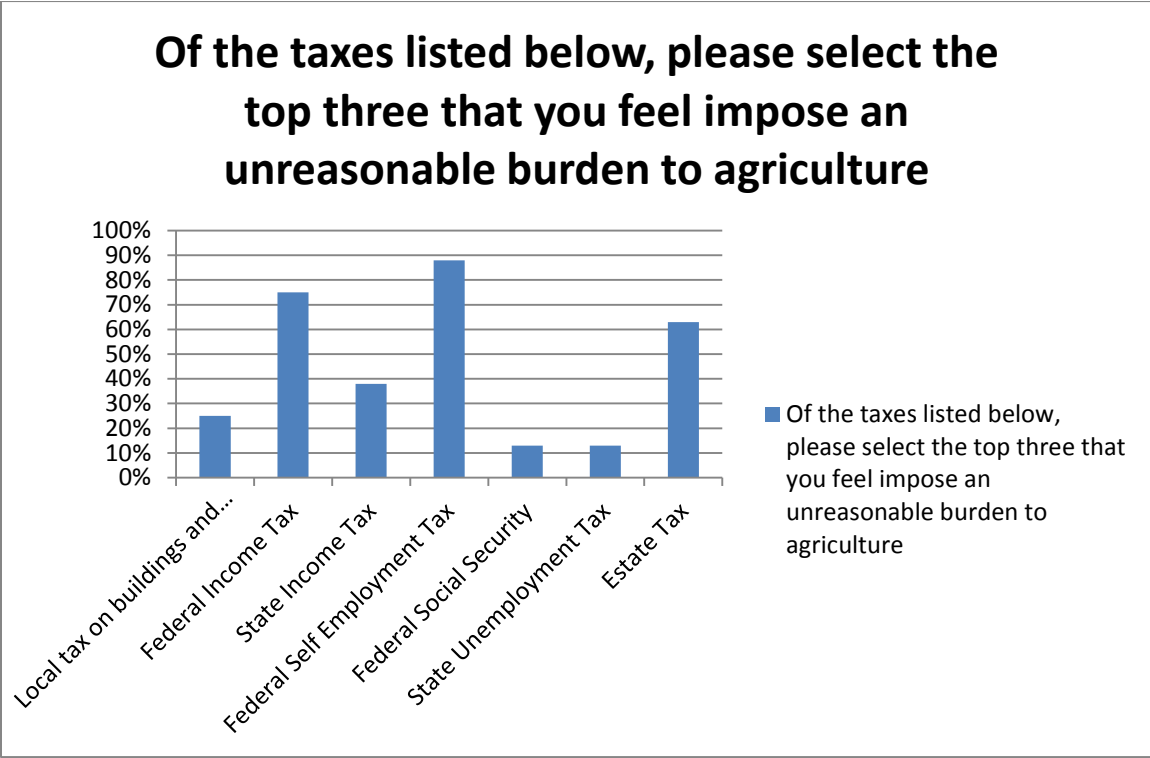


Figure 8. Source: Perquimans Producer Survey 2017

In 2012, the majority (91 percent) of forest land in Perquimans County was privately owned<sup>36</sup>. Forty percent of survey respondents have forest management plans, and 60 percent responded that they have no such plans. A forest management plan is a valuable tool for farmers and landowners to use these woodlands for greater sustainability and profitability. Management plans are required for forest landowners to enroll properties in the county's Present Use Value program. The survey data indicates the need for the development of an educational program to inform and train landowners on the benefits of a formal forest management plan.

Only 14 percent of survey respondents have experienced problems with neighbors in regard to their farming operation. The only problems reported were trespassing and boundary conflicts.

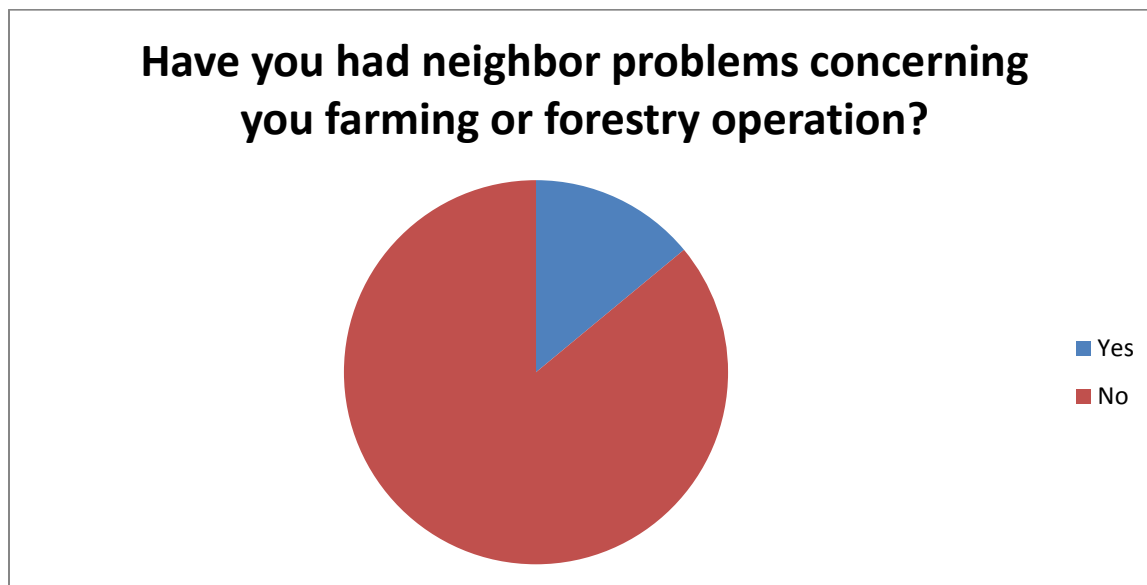


Figure 9. Source: Perquimans Producer Survey 2017

Perquimans County leaders enacted a Voluntary Agricultural District Program in 2009. One hundred percent of farmers responding to the survey were aware of the Voluntary Agricultural District program. Twenty-nine percent of the respondents have acreage in the VAD program. The county has not adopted an Enhanced Voluntary Agricultural District program.



Additionally, farmers expressed a need for management, technical and marketing training on the following topics to enhance their operations:

- Forward pricing and hedging	67%
- Direct to consumer marketing of products	33%
- Identifying and managing risks	67%
- Business website development	33%
- Estate planning/Farm transition	86%
- Federal and state contracts training	57%
- Timber management	57%
- Development of forest management plan	43%
- Longleaf Pine production	14%
- Marketing and sales promotion	50%
- Organizing buyer/seller groups	33%
- Diversifying through agritourism	17%
- Regional product branding	17%

There are multiple opportunities for training and education. This information should serve as a continuing guide for agencies and institutions involved in education within the county to develop plans for short-term and long-term training to serve the agricultural community.

Perquimans County farmers who were surveyed and interviewed recognized the value of educating the non-farm public to the benefits of agriculture to the county. Eighty-eight percent of farmers surveyed were in favor of a program to increase non-farm residents' knowledge of the social and economic benefits of agriculture.

Perquimans County farmers and operators who responded to the survey stated that there is a definite need for agricultural education in public schools, 4-H and youth development, community colleges and other colleges and universities. Figure 10 shows the strong support for such programs, which illustrates the need to train youth in the importance of agriculture and the diverse agricultural career opportunities.

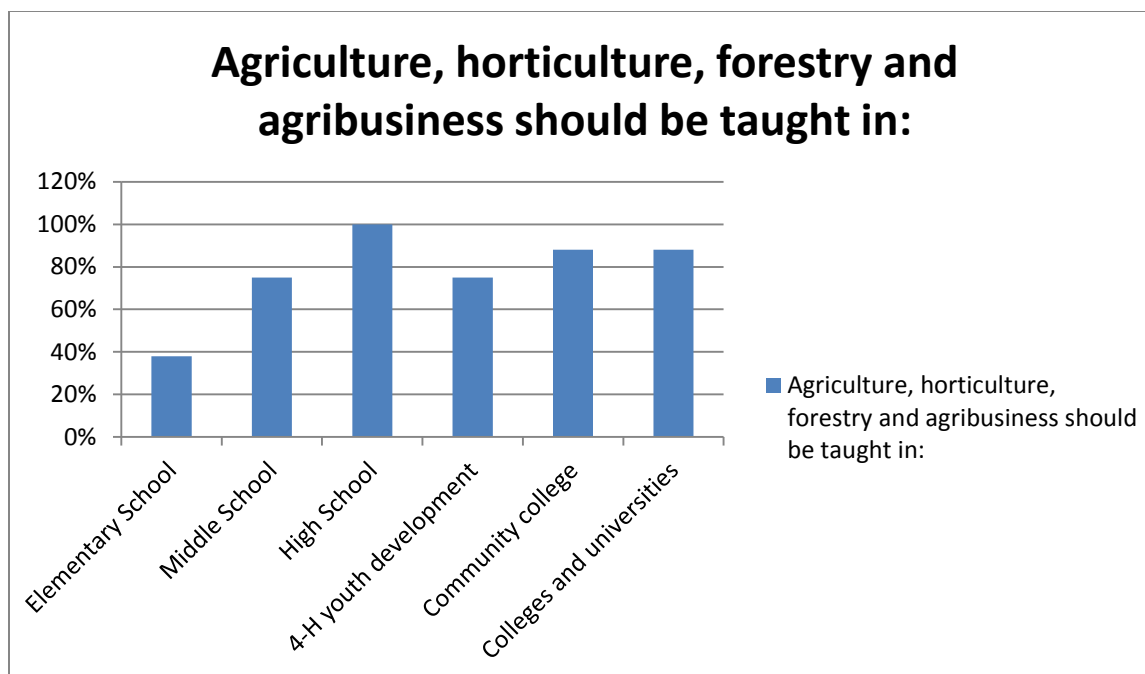


Figure 10. Source: Perquimans Producer Survey 2017

Surveyed farmers in Perquimans County (63%) were in favor of using government funds to support agriculture and agricultural economic development in the county.

Interviews were conducted with a cross-section of farmers to obtain their opinions on the issues, challenges and opportunities impacting agriculture in Perquimans County. The following were stated as issues that impacted family farms as well as the perpetuity and profitability of these operations:

Need for farm and estate transition planning. All farmers interviewed recognized the importance of planning, but few had formal plans. Issues related to estate planning identified included no one in next generations to take over farming, equitable treatment of all heirs, and estate taxes.

- Solar and wind farms pressures resulting in loss of farmland.
- County government officials are supportive of agriculture and agribusiness.
- High input costs. Farmers expressed concern over the expense of new equipment and technology. Low commodity prices make it hard to justify investments in new technology.

- Drainage issues due to damage from Hurricane Matthew result in flooding of low lying areas during rain events.
- Non-farm people building homes in agricultural areas.
- Lack of farmer representation on County Commissioner Board
- People moving in from other areas wanting to change things in Perquimans County.
- Federal regulatory restrictions on pesticides and other ag production processes.
- Lack of qualified labor for farming operations
- Lack of young people coming back to the farm
- Voluntary Agricultural Districts are an opportunity to preserve and protect farmland.
- Multiple markets for grain
- Expansion by contract animal operations
- Production of specialty crops such as sage
- Viable market for forest products
- Perquimans population is agricultural friendly
- Access to Raleigh and Virginia markets for produce
- Career opportunities for college graduates in agriculture
- Wind farms and Interstate highways

### *Agribusiness Survey and Interview Analysis*

Agribusinesses provide essential resources and services vital to the success and profitability of agriculture production services. Agribusinesses, just as any other business, provide jobs and employment, which stimulate the local economy. Examples of agribusinesses include feed dealers, seed processors, agricultural lenders, agricultural and crop consultants, produce marketers, and agritourism services.

Agribusinesses surveyed (100%) recognized that 75-100 percent of their business was generated from the farm community. Though these agribusinesses offer agricultural services, many also provide services and products that meet the needs of non-farm residents and industries. In the last five years, 50 percent of agribusinesses surveyed have increased the size of

their operations. One-hundred percent reported an increase of agricultural inventories and sales. As non-farm populations continue to grow, agribusinesses will continue to seek ways to service non-farm residents, which will provide additional support for these agribusinesses.

Agribusiness owners also noted trends in agricultural production that could have impacts on their operations including, but not limited to, a shift to more sophisticated farm operations, fewer small farms, more specialty and direct market operations, and more farm diversification. These trends are being driven by population increase, desire for farm value-added products and change in farm technology.

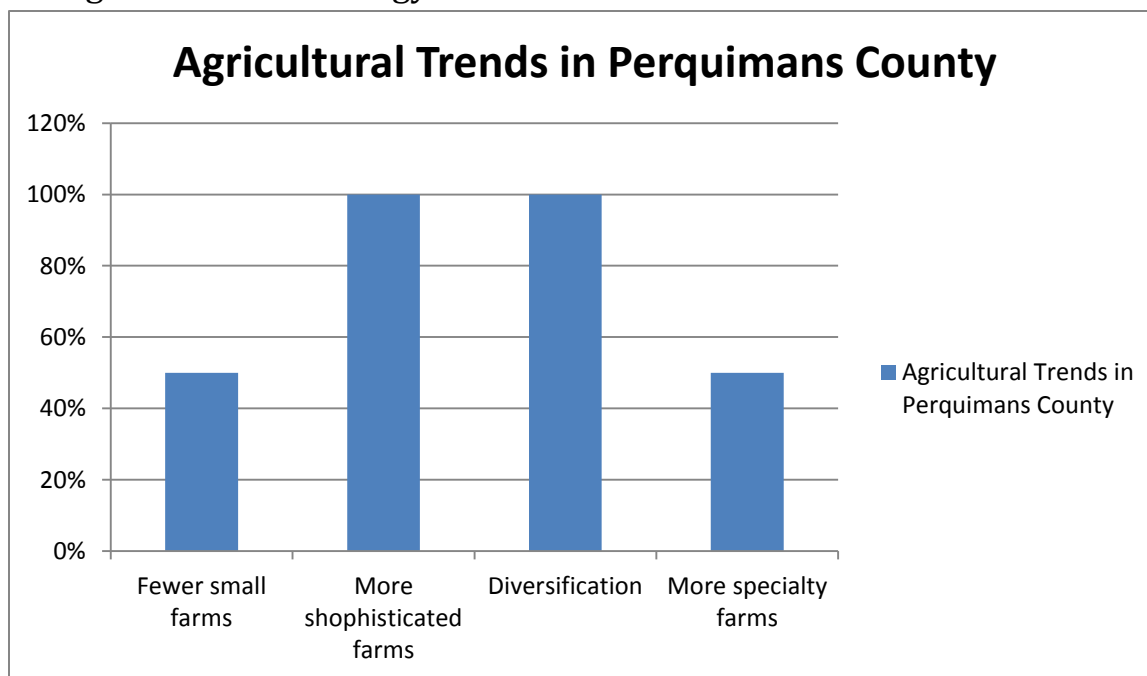


Figure 11. Source: Perquimans Agribusiness Survey 2017

Following is a list of challenges and opportunities expressed by the respondents that will have an effect on agriculture in the future.

- One hundred percent of agribusiness respondents identified farm transition and estate planning as a major issue in Perquimans County. They also expressed the need for professional assistance and training in transition and estate planning.
- One hundred percent of agribusiness respondents noted the importance of education of Perquimans County citizens on the impact of agriculture and agribusiness on the county's economic viability.
- One hundred percent of agribusiness respondents have no problems with labor issues.
- Fifty percent of survey respondents saw a need for consumer education on economic impact of buying local.
- All of those questioned said that youth education in the field of agriculture is of great importance, and continued support of these programs in secondary and post-secondary schools is essential to the future of agriculture.
- Fifty percent those surveyed noted agritourism was a viable opportunity for agricultural expansion in Perquimans County.
- One hundred percent of respondents believe that government funding should be used to promote agricultural development.

When asked what would provide additional assurance of success in their business, fifty percent needed succession planning training and education on new technologies in farming.

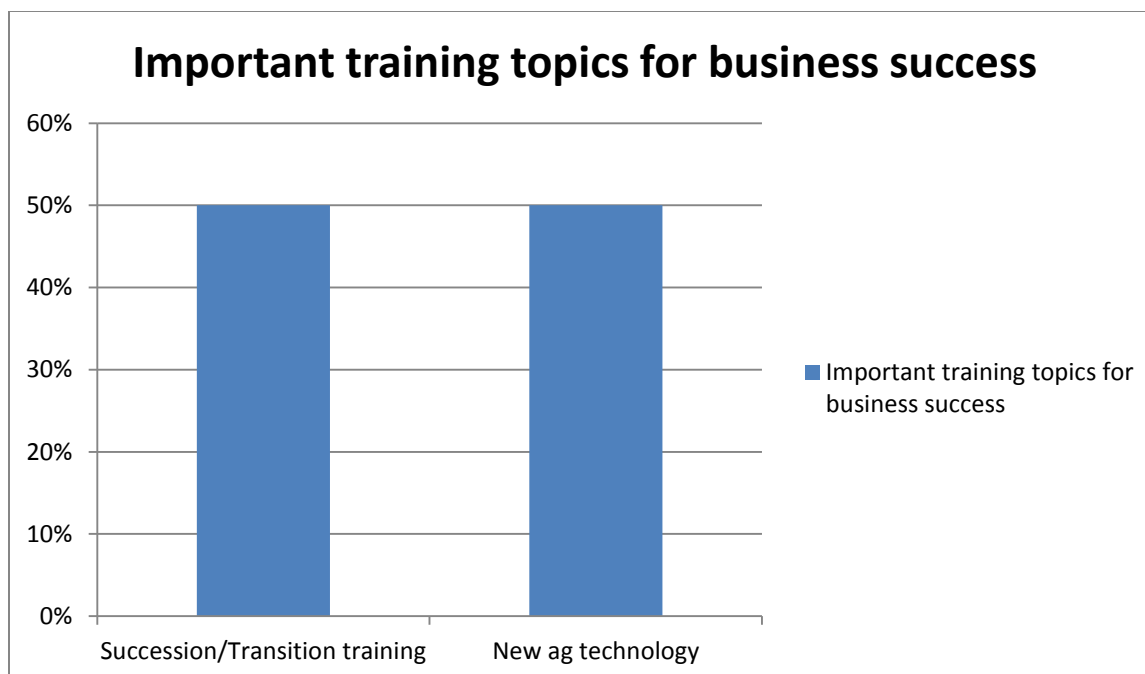


Figure 12. Source: Perquimans County Agribusiness Survey 2017

Perquimans County Agribusiness leaders also identified several challenges, threats and opportunities for farms and forests:

- Solar and Wind farms expansion taking valuable farm land out of production.
- Lack of public knowledge of agriculture and impact on Perquimans County's economy
- The cost of new agricultural technology, while necessary for efficiency, is squeezing profit margins for farmers.
- Increasingly, the general public doesn't know where their food comes from, nor do they understand how food is produced.
- Agritourism movement is viable business opportunities for new and existing Perquimans County farmers.
- The lack of succession planning among farmers and land owners.
- EPA regulations are a threat to agricultural production and profitability.
- Loss of export opportunities for agricultural commodities produced in Perquimans County.
- Perquimans has a strong Cooperative Extension program with people willing to help agriculture and agribusiness.

- High input costs make it difficult to show a profit with low commodity prices

Agribusiness enterprise owners recognize the value of farming to the economy and environment of Perquimans County.

### ***Non-Farm Resident Survey and Interview Analysis***

Perquimans County is a small rural community with a strong agricultural base. The majority of the residents have lived there all their lives, while others are drawn to move to the county for waterfront living and associated amenities. The majority (83%) of survey respondents have lived in Perquimans County more than 10 years. Eighty-three percent live within a quarter mile of a farm or timber operation. A positive result of this close relationship with agriculture is that 75 percent are good neighbors. With this in mind, 83% have not experienced a problem. The only two problems reported were smoke and dust from neighboring farms, and packs of hunting dogs running on neighbor's property.

When asked about the state of agriculture as a viable industry in Perquimans County, 83 percent of respondents felt that farming is holding its own and has some potential for future growth. Seventeen percent said that agriculture is an expanding industry with significant growth potential in Perquimans County.

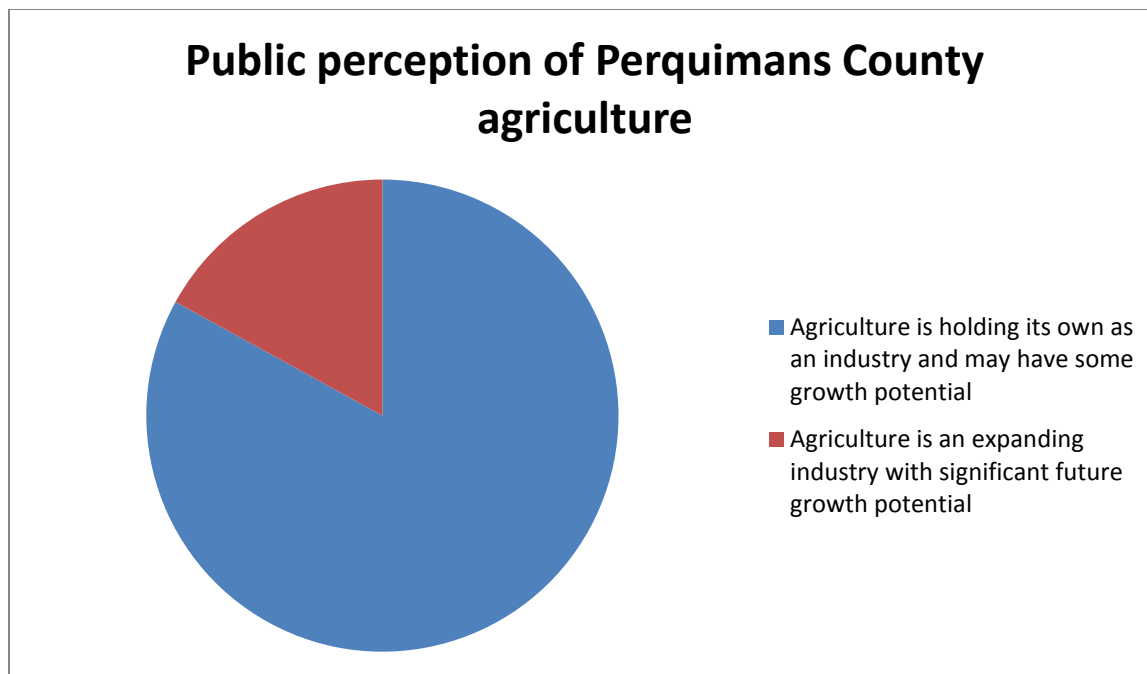


Figure 13. Source: Perquimans Non-Farm Resident Survey 2017

Perquimans County non-farm residents (50%) do not have a good understanding of the economic impact of the entire agricultural sector on the county's economy (Figure 13). The value of agricultural industry which in 2012, provided a total economic impact of \$87,810,647 to Perquimans County. (Mike Walden)

One hundred percent of surveyed non-farm residents felt that Perquimans County should take steps to help preserve farms and forests. Eighty-three percent of respondents reported that they support local farming by purchasing local produce from farmers markets; pick-your- own operations, and road side stands. Eighty-three percent of non-farm residents say that they purchase plants from local greenhouses and nurseries. When buying local produce, the graph below represents how survey respondents verify the origin of the products.





Figure 14. Source: Perquimans Non-Farm Resident Survey

The statistics below reveal non-farm residents agreement or disagreement with statements about agriculture in the Perquimans County.

- 100 percent agreed farms and forests enhance scenic beauty and open space
- 100 percent agreed farmers are good neighbors
- 83 percent agreed that local farmers deliver high quality products
- 100 percent agreed that farming has a positive impact on the environment
- 100 percent stated that farming and agribusiness are high technology businesses
- 67 percent agreed farming presents a good career for enterprising people
- 67 percent agreed that agriculture and forestry are viable career opportunities
- 67 percent believe that the price of most farm food commodities is relatively low
- 83 percent stated that tax breaks for farmers are important

- 100 percent would support farm and forest preservation efforts in the county
- 67 percent would support the use of government funds for farm and forest development

This information clearly illustrates that non-farm residents surveyed have a positive image of agriculture in the Perquimans County.

The following statements from non-farm residents in Perquimans County revealed the following threats:

- Use of antibiotics in animal production
- Protect bees from crop dusting
- Long-term threat from solar and wind farms
- More people moving to county that don't understand agriculture
- People being elected to county government that don't understand agriculture
- Urbanization
- Aging population of farmers

Non-farm residents also listed the following opportunities for agriculture in Perquimans County:

- Good soil and climate
- Raising non-GMO corn
- Increase production through technology
- Utilize the proposed marine park for aquaculture if feasible

One respondent added, "Agriculture and forestry contribute to our culture. People value hard work, go out of their way to help a neighbor or a stranger, create a beautiful panorama of fields and forests, instill an understanding of good land stewardship, help children understand where food comes from and give us serenity from our surroundings. I value the land and those who work so hard to make it productive."

## Recommendations

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The major result of the Perquimans County Agricultural Development Plan is a set of recommendations with actions steps that, when implemented, will bring about desired change. These steps are based on input from the citizens affected by the plan as well as from other agricultural sources. The following recommendations are extrapolated from the data obtained through interviews and surveys of Perquimans County farmers, agribusinesses and citizens and data from USDA and NCDA&CS.

For this plan to be effective, Perquimans County citizen leaders, agencies and organizations must follow through with support and collaboration of these recommendations. This plan needs to be evaluated annually to keep it up to date and viable. The annual update will ensure that recommendations are being accomplished and new ones added as needed. Following are recommendations that can be used to maintain and enhance agriculture in Perquimans County.

### *Recommendation One:*

#### **Support measures to protect and promote forest and farmland in Perquimans County.**

Endorsement, certification and advocacy of the Perquimans County Agricultural Development Plan are critical to protecting and enhancing agriculture in the county. Once the plan is endorsed by the Perquimans County Board of Commissioners and certified by the North Carolina Department of Agriculture and Consumer Services, the county will receive priority status for funding from the NCDA&CS's Agricultural Development and Farmland Preservation Trust Fund for agricultural projects. Though residents largely support agriculture, added education and understanding is needed. County officials should be informed of agricultural information affecting Perquimans County.

### ***Action Steps***

- Present the Perquimans County Agricultural Development Plan to the Board of Commissioners for endorsement and submit to NCDA&CS for certification.
- Appoint a Perquimans County Agriculture Advisory Board to oversee and manage the plan for the benefit of agriculture in the county.
- Annually review the plan for progress and addition of any needed new recommendations.
- Utilize all available media outlets to inform county leadership and the public about the plan's progress and success.
- Develop and implement an educational program for farmers and landowners regarding available farmland preservation tools and incentives suited for Perquimans County.
- Educate landowners and farmers of the benefits of Present Value Taxation that will encourage enrollment.
- Encourage local government, economic developers, land developers, planners, the North Carolina Division of Coastal Management and the North Carolina Department of Transportation to work with the Perquimans County Agricultural Advisory Board to informing and engaging them in county projects that will impact agricultural production.

### ***Timeline:***

County Commissioners should endorse the Perquimans County Agricultural Development Plan by March 2018. Efforts to increase agricultural awareness and representation should begin in mid-2018.

### ***Responsible Parties:***

Perquimans County Agricultural Advisory Board, Perquimans County Cooperative Extension, Albemarle Soil and Water Conservation District, North Carolina Forest Service, Perquimans County Economic Development, Perquimans County Planning and Zoning Department, and Perquimans County Board of Commissioners.

### ***Recommendation Two:***

#### **Promote and Increase enrollment in Voluntary Agricultural District (VAD) and adopt and implement Enhanced Voluntary Agricultural District (EVAD) Programs**

Perquimans County has Voluntary Agricultural District ordinance that was adopted in 2009. However, more farmers need to be aware of the benefits of enrollment in VAD and EVAD.

#### ***Action Steps:***

- The Perquimans County Agricultural Advisory Board will provide leadership in promoting the Perquimans VAD ordinance.
- The Perquimans County Commissioners will investigate the benefits of adopting an Enhanced VAD ordinance.
- Design and implement a marketing plan using all available media to educate farmers, land owners, developers and realtors on the benefits of VAD ordinance.
- Have appropriate agency staff encourage and assist landowners with understanding and enrollment in VAD.

#### ***Timeline:***

Targeted promotion of VAD and the investigation of the benefits of EVAD should begin during the second quarter of 2018.

#### ***Responsible Parties:***

Perquimans Agricultural Development Advisory Board, in conjunction with Perquimans County Cooperative Extension, will lead the process of creating the EVAD ordinance. The following agencies will cooperate: Perquimans Farm Bureau Board, Albemarle Soil and Water Conservation District, USDA Farm Service Agency and Natural Resource Conservation Service, Perquimans County Tax Office, Perquimans County Register of Deeds, Perquimans County Economic Development, Perquimans County Planning and Zoning Department and Perquimans County Board of Commissioners.

### ***Recommendation Three:***

#### **Develop and conduct programs to assist Perquimans County farm and forest landowners with farm transition planning.**

The average age of farmers in Perquimans County was 54.1 years in 2012. According to surveyed farmers, none have formal farm transition plans. Additionally, interviews with farm lending authorities showed lack of farm transition planning as a leading concern about the future of agriculture in the area.

#### ***Action Steps:***

- Plan and conduct a series of workshops that uses a variety of specialists and agencies to provide information on farm transition and estate planning.
- Develop an apprenticeship program in which young farmers work with experienced producers to learn more about agricultural production and gain more knowledge about transition opportunities.
- Identify farmers willing to investigate innovative strategies for farm transition with beginning farmers.

#### ***Timeline:***

Farm transition workshops should start in the fall of 2018 and repeated yearly. In the spring of 2019, a study should be conducted on the feasibility and interest in a farm apprenticeship/mentoring program.

#### ***Responsible Parties:***

Perquimans County Agricultural Advisory Board, Perquimans County Cooperative Extension, Perquimans County Farm Bureau, Ag Carolina/Farm Credit, University of Mount Olive Lois G. Britt Agribusiness Center, local attorneys and agricultural economic specialists.

#### ***Recommendation Four:***

#### **Promote appreciation and awareness of the benefits of agriculture to Perquimans elected officials and citizens.**

Today, the majority of the general population is removed from farming and agribusiness. The public needs to understand the importance of agriculture to the local economy. Additionally, non-farm residents need to appreciate where food and fiber is produced. Understanding agriculture will provide stronger relationships between producers and consumers as well as additional support local farms.

#### ***Action Steps:***

- Develop a comprehensive agriculture awareness plan and determine all feasible delivery presence such as social media, speakers' bureau, print and broadcast media.
- Conduct annual farm tour to promote Perquimans diverse agricultural operations including forestry, row crop farming, road side markets, specialty crops and agritourism.
- Develop presentations that show the role of agriculture in Perquimans County to be shared with civic, school and religious organizations.
- Expand and promote events that highlight the local foods movement.
- Involve 4-H and FFA members in the promotion of agriculture.

#### ***Timeline:***

Efforts should begin after the adoption of the Perquimans County Agricultural Development Plan in 2018.

#### ***Responsible Parties:***

Perquimans County Agricultural Advisory Board, Perquimans County Cooperative Extension, Perquimans County Farm Bureau Board of Directors, North Carolina Department of Agriculture and Consumer Services, University of Mount Olive Lois G. Britt Agribusiness Center, USDA Farm Service Agency, Albemarle Soil and Water Conservation District, and Perquimans Public Schools.

### ***Recommendation Five:***

#### **Expand and Support Youth Agricultural Educational Programs.**

Agribusiness leaders, farmers and non-farm residents were all in favor of youth agricultural education as an important to the future of agriculture in Perquimans County.

#### ***Action Steps:***

- Encourage youth to actively participate in all agricultural organizations such as FFA and 4-H in order to develop leadership skills and agricultural experiences.
- Support teacher training for the expansion of the NC Farm Bureau's Ag in the Classroom curriculum for primary and elementary students.
- Work with funders, both public and private, to provide needed resources for 4-H and FFA programs.
- Promote agriculture as part of the STEM (Science, Technology, Engineering and Math) initiative in the public school system.
- Coordinate and promote summer high school and college internships with agricultural enterprises.

#### ***Timeline:***

Coordinated programming efforts will begin in the spring of 2018 and continue as planned throughout the year.

#### ***Responsible Parties:***

Perquimans County Cooperative Extension, Perquimans Public Schools, regional colleges and universities, Perquimans County Farm Bureau, Perquimans County farmers and agribusiness owners.



### ***Recommendation Six:***

#### **Develop Technical, Business and Marketing Training for the Maintenance and Expansion of Agriculture in Perquimans County.**

Perquimans County farmers expressed a need for training in numerous areas relating to changes, growth and opportunities in agriculture.

#### ***Action Steps:***

- Develop an information network of support agencies and people who can assist new and existing farmers with training and knowledge as they plan and begin new enterprises.
- Conduct training on business planning that will enhance farmer knowledge about forward pricing and hedging, identifying and managing risks, marketing and sales promotion, direct to consumer marketing of products, business website development, regional product branding, diversifying through agritourism, and organizing buyer/seller groups.
- Offer training experiences in timber management, development of a forestry management plan, and selecting consulting foresters.
- Facilitate grant writing training to help farmers apply and securing state and federal contracts for their products.
- Educate farmers on the new revenue opportunities for food product sales and agricultural services to the growing population centers near Perquimans County.

#### ***Timeline:***

Programming efforts will begin in late 2018. Schedules for trainings, workshops and conferences will be developed by members of the implementation team.

#### ***Responsible parties:***

Perquimans County Cooperative Extension, University of Mount Olive Lois G. Britt Agribusiness Center, NC Forest Service, NCDA&CS, USDA Natural

Resources and Conservation District, and Perquimans County Farm Bureau  
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<sup>31</sup> 2016 North Carolina Agricultural Statistics, United States Department of Agriculture, National Agricultural Statistics Service and North Carolina Department of Agriculture and Consumer Services

<sup>32</sup> North Carolina State Extension, Perquimans County Forestry Impacts, 2014,  
<https://content.ces.ncsu.edu/perquimans-county>

<sup>33</sup> USDA Census of Agriculture, Perquimans County Profiles, 2002, 2007, 2012  
[https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37143.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Carolina/cp37143.pdf)

<sup>34</sup> USDA Census of Agriculture, Perquimans County Profiles, 2002, 2007, 2012  
[https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37143.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Carolina/cp37143.pdf)

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<sup>35</sup> USDA Census of Agriculture, Perquimans County Profiles, 2002, 2007, 2012

[https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37143.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Carolina/cp37143.pdf)

<sup>36</sup> North Carolina State Extension, Perquimans County Forestry Impacts, 2014, <https://content.ces.ncsu.edu/perquimans-county>

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## **Appendixes**

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### ***Perquimans County Voluntary Agricultural District Ordinance***



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*Perquimans County Producer Survey*

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*Perquimans County Agribusiness Survey*

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*Perquimans County Non-farm Resident Survey*